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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,615	12/21/2001	Gilles Rubinstenn	05725.1010-00	3934

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EXAMINER

STREGE, JOHN B

ART UNIT PAPER NUMBER

2624

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,615

Applicant(s)

RUBINSTENN ET AL.

Examiner

John B. Strege

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-6, 8-17 and 19-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8-17 and 19-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/22/06.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/22/06 has been entered.

***Response to Amendment***

The amendment received 8/22/06 has been entered in full.

***Response to Arguments***

Applicant's arguments filed 8/22/06 have been fully considered but they are not persuasive. Specifically the Applicant argues that Naigaishi does not teach or suggest "proposing to the subject an aesthetic feature for affecting the at least one external body condition based, at least in part, on the analyzing of the external body condition [via the three dimensional image]," (brackets added by the Applicant). The Examiner has pointed out that Naigashi does teach proposing to the subject an aesthetic feature (makeup) for affecting the at least one external body condition (skin) base, at least in part, on the analyzing of the external body condition. The Examiner does not rely upon Naigaishi in order to teach that the analysis is via a three dimensional image, but instead relies upon Furuta. Furthermore the Applicant argues that Furuta does not teach the "proposing" feature of claim 20. The Examiner however does not rely upon Furuta to disclose this limitation but rather relies on Naigaishi. The Applicant then goes on to

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argue that the Examiner is using impermissible hindsight in order to combine Furuta and Naigaishi because Furuta deals with a beauty simulation while Naigaishi is dealing with a system to propose a beauty product to the user. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The application of Furuta and Naigaishi both deal with using image processing for beauty consultation purposes. While Naigaishi does not explicitly disclose that a beauty simulation is carried out with the proposed makeup, it is taught that beauty simulations are well known in the field of image processing (see paragraph 5 of the machine translation for the "lip color advice system and approach" which carries out simulation of the approach which suited the man is indicated). Furthermore both inventions are pointed to the same end of selling beauty products to a consumer. Thus based on the teaching of Naigaishi and Furuta it would be obvious to one of ordinary skill in the art to combine the two in order to allow an individual to be able to discern how they would look with the proposed makeup applied. The motivation for doing so would be to allow for a more realistic presentation of the product with the hope that it would sell more of the product. Thus the rejection of claim 20 is maintained.

Regarding claims 33-36, the Applicant uses the same "proposing" argument which the examiner has already addressed above.

Applicant's arguments with respect to claims 28-31, and 37 have been considered but are moot in view of the new grounds of rejection.

### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-6,8-17,19-27,32, 38-39, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaishi JP 2001104050 (machine translation provided) in view of Furuta et al. US. Patent Publication 20010037191 (hereinafter "Furuta").

Nagaishi discloses a method of enabling an analysis using a facial image (all of the following taken from the English translation of the abstract), the method comprising: facilitating processing of the facial image to enable a beauty analysis; analyzing the at least one external body condition via the image (the condition of the skin is analyzed); and proposing (advice is given as to the makeup for the subject to wear) to the subject an aesthetic feature for affecting the at least one external body condition based, at least

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in part, on the analyzing of the external body condition (based on the analysis of the face).

Naigaishi does not explicitly disclose that the method uses a three-dimensional facial image and thus does not disclose facilitating construction of a three-dimensional facial image using at least one captured image of a subject's face.

Furuta discloses a three-dimensional beauty simulation client-server system which is capable of handling a users face in a three-dimensional fashion and of providing more realistic beauty simulations (first sentence of the abstract). As seen in figure 3 multiple cameras are disclosed (1a, 1b) and the images are sent to the 3D face model generating unit 2. Alternatively if the user has a camera-equipped computer or internet cellular phone, a plurality of images obtained therefrom may be sent to the server, enabling the server 10 (figure 1) to construct a 3D face model (paragraph 32). Also disclosed is the makeup simulation unit 3 that allows simulations of makeup, cosmetic surgery, clothing, perfume, accessories, hair style, etc. based on the 3D information (paragraph 41). Using this simulation the consumers face may be reproduced with the new makeup style, etc. (paragraph 38). Furuta discloses that there is a problem with prior art systems in which the two dimensional image processing did not appear realistic, thus proposes making the system three dimensional (paragraphs 5 and 6 of page 1).

Naigaishi and Furuta are analogous art because they are from the same field of endeavor of image processing for beauty consultation purposes.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Naigaishi's two-dimensional system to make it three-dimensional according to the teachings of Furuta. The motivation for doing so would be to provide realistic beauty simulations that allow the consumer to see how they would look with the product. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Naigaishi and Furuta to obtain the invention of claim 20.

Regarding claims 2-5, and 21-24 Furuta discloses that the means of the invention may be realized through software (paragraphs 161-162). Furthermore the server consists of a data control unit for storing information (10c figure 1).

Regarding claim 6, makeup is a beauty product.

Regarding claim 8, Furuta discloses that using morphing technology can enable one to resemble one's favorite model, and the user can learn what percentage of the image comprises her own features and what percentage comprises the models features (paragraph 41). Furthermore a simulation in which the level of beauty and degree of aging of the face are assessed can be carried out (paragraph 43).

Regarding claim 9, Furuta discloses that the makeup simulation drawing software uses a method in which the face as a whole is made up by applying makeup to individual parts of the face, and the part of the face is selected by the user including lips, eyebrows etc. In this method the sought makeup style is pasted onto the image (paragraph 57).

Regarding claim 10-11, as discussed Furuta discloses makeup.

Regarding claim 12, Furuta discloses that it is possible to view the face from various angles, as if the camera viewpoint had continuously moved (paragraph 104).

Claim 13 is dependent on claim 1 (rejected above by Furuta) and recites instructing the subject on how to transmit the at least one captured image to a location remote from the subject, wherein the three-dimensional representation is constructed at the remote location. Furuta discloses that the consumer may send images to the server to construct 3D face data (paragraph 32). Furuta does not explicitly disclose instructing the subject on how to transmit the image. It is obvious that the internet site used to submit the images would provide some instruction as to how to submit the images, so that the user could avoid frustration of trying to find out for themselves how to do it, and thus experience a pleasant shopping experience and want to return in the future for more shopping.

Claim 14 discloses prompting the subject to capture the at least one image of the subjects face. Furuta discloses that images may be captured (paragraph 32). It would be obvious to prompt the user before taking the image so that an image of the user with his eyes closed or in an awkward position would not be used for the later analysis.

Regarding claim 15, Furuta discloses that the processing can take place through the internet to allow for analyzing the image at a location remote from the subject.

Regarding claim 16, as seen in figure 3 a plurality of cameras (1a 1b) are used to capture a plurality of facial images.



Regarding claim 17, Furuta discloses the facial image generator beginning with paragraph 108 in which a three dimensional structure (frame) is used in coordination with the captured images.

Regarding claim 19, the evaluation can take place over an internet connection (11 figure 1) allowing for analyzing at a location remote from the subject.

Regarding claim 25, Furuta discloses that using morphing technology information to enable one to resemble one's favorite model may be obtained, for example intermediate images resembling a cross between the user and their favorite model may be created (paragraph 41).

Claim 26 is similar to claim 1, except it is directed to a computer readable medium. Thus the same arguments used for the rejection of claim 1 apply equally to the rejection of claim 26.

Claim 27 is similar to claim 1, except it is directed to a system. Thus the same arguments used for the rejection of claim 1 apply equally to the rejection of claim 27.

Regarding claims 32 and 39, Furuta discloses a makeup simulation unit 3 using the facial model.

Regarding claim 38, Nagaishi discloses analyzing the face image and outputting information showing the condition of the skin, and since advice is given based on the condition of the skin the extent and severity of the skin condition must be determined.

Regarding claims 41-42 Furuta discloses that each face has its own light and dark effects which are taken into account in the simulation (paragraph 45).

Regarding claims 43-44, if a three-dimensional image is viewed straight on then it will appear two dimensional.

3. Claims 28-31, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaishi JP 2001104050 in view of Furuta et al. US. Patent Publication 20010037191 (hereinafter "Furuta") and further in view Nobori et al. *Image Synthesis System Using 3D Model-based Coding Simulates Facial Expressions and Aging* (hereinafter "Nobori", cited in the IDS 8/22/06).

Regarding claim 28 Nagaishi nor Furuta explicitly disclose facilitation construction of a three-dimensional facial image using at least one captured image of a subject's face comprises applying the at least one captured image in a virtual manner on a three-dimensional frame.

Nobori discloses a fitting algorithm using a polygonal wireframe model to obtain a synthesized 3d face model (section 2). This provides a practical approach for forming the synthesized 3d model (conclusion).

Nagaishi, Furuta, and Nobori are analogous art because they are all from the same field of endeavor of image processing for beauty consultation purposes.

At the time of the invention it would have been obvious to one of ordinary skill in the art to make the 3d model as discussed by Furuta using a 3d frame. The motivation is that it is a practical way of doing so. Regarding claim 29, as seen in figure 1 Nobori discloses a virtual wire mesh.

Regarding claim 30-31, Nobori discloses generating the frame based on stored and inputted information (figure 1).

Regarding claim 40, Nobori discloses adding a dimensional effect to the three-dimensional facial image (section 2).

4. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaishi JP 2001104050 in view of Furuta et al. US. Patent Publication 20010037191 (hereinafter "Furuta") and further in view of Cosatto et al. USPN 6,504,546 (hereinafter "Cosatto").

Nagaishi nor Furuta explicitly disclose enabling a calibration of the three-dimensional facial image to address a perceived difference between the three-dimensional facial image and the subjects face.

Cosatto discloses a method for modeling three-dimensional objects wherein using color calibration periodically the appearances of facial features can be tracked. In this manner reliable measurements of the outline of the facial features are obtained (col. 8 lines 15-41).

Nagaishi, Furuta, and Cosatto are all analogous art because they are all from the same field of endeavor of facial imaging.

At the time of the invention it would have been obvious to one of ordinary skill in the art to enable calibration within the inventions of Nagaishi and Furuta as taught by

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Cosatto. The motivation for doing so is that changes in the appearances of the facial features can be easily tracked. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Naigaishi, Furuta, and Cosatto in order to obtain the invention as specified in claim 33.

Regarding claim 34, as discussed Cosatto discloses color calibration.

Regarding claim 35, Furuta discloses a makeup simulation unit 3 using the facial model.

Regarding claim 36, Cosatto discloses the color-calibrated three-dimensional facial image and Furuta discloses a makeup simulation unit 3 using the facial model.

5. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaishi JP 2001104050 in view of Furuta et al. US. Patent Publication 20010037191 (hereinafter "Furuta") in view of Cosatto et al. USPN 6,504,546 (hereinafter "Cosatto"), and further in view of Vinas et al. USPGPUB 2003/0164955 (hereinafter "Vinas").

Cosatto discloses color calibration and tracking changes in the appearances of facial feature, however does not explicitly disclose allowing the user to manually calibrate the image. It is well known to allow manual color calibration in image processing. Vinas discloses that if a user is very sensitive to color issues then he may manually initiate a color calibration process at any time (paragraph 46).

Cosatto and Vinas are analogous art because they are from the same field of endeavor of color calibration.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine Cosatto and Vinas to allow for manual color calibration since it would give the user more control of the process if they are color sensitive. Thus it would have been obvious to one of ordinary skill in the art to combine Nagaishi, Furuta, Cosatto, and Vinas to obtain the invention as specified in claim 37.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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